[Old Timber Houses at Coventry.]

ANCIENT COVENTRY.

Coventry as it is, though, from the appearance of its overhanging timber houses and narrow streets, it might seem to have undergone little change beyond that which time produces, is a very different place from Coventry as it was. It is still, indeed, entitled to be called a city, and has a county of its own, seven miles in length and twenty miles in circumference; but it is no longer "the third city in the realm," "the Chamber of Princes," the favoured city of kings and nobles, resorted to for the magnificence of its ecclesiastical establishments and the splendour of its annual shows. The lofty embattled wall which surrounded the city, with its towers and gates, has been levelled to the ground; its great priory and its cathedral, with their splendid architecture and sumptuous decorations, have been swept away; its monastery of Grey Friars, and its monastery of White Friars, are gone "with all their trumpery;" its lofty cross, of beautiful Gothic architecture, is no longer there. The visitors, on horseback and on foot, who crowded the city and put to proof the accommodation of its great inns, are no longer seen. Still there are remains of the architectural glories of Coventry exhibited in its ancient churches, its Guild-hall, and that old timber architecture which, as the city has never suffered the calamity of a great fire, still constitutes a larger part of the streets of Coventry than of almost any other of the ancient towns of England. Leland, writing in the reign of Henry VIII., says, "There be many fair streets, well builded of timber; there be divers fair suburbs without the walls." Old, dingy, and neglected, the houses are not now, indeed, so fair as then, when they were comparatively new and fresh, when the plaster was carefully whitened, and the timbers were painted, as well to make them durable as handsome. The picturesque forms of the timber frame-work still remain, but imagination is left to fill up the effect which would be produced, when, on occasions of pomp or festivity, a flag or pendent streamed from every gable pinnacle, and green boughs waved on every balcony.

On entering the city, the appearance of the streets at once indicates its high antiquity. The prosperity of the place appears in the beginning to have been chiefly owing to Leofric, fifth Earl of Mercia, who founded a monastery there, and bestowed many privileges on the town, of which he was the lord. Earl Leofric's wife was the celebrated Lady Godiva. The old legend of her riding naked through the city seems to rest on no good authority. Leofric died in 1057, and the strange and improbable story is not mentioned in any known writer earlier than Matthew of Westminster, who was living in 1307, 250 years afterwards. The lordship afterwards became vested in the Earls of Chester, the Earls of Leicester, and, in the reign of Edward III., in the Earls of Cornwall, when, being thus annexed to one of the royal titles, Coventry became an especial object of royal favour. Edward the Black Prince often resided there.

The wall was begun in 1355, by authority of a licence granted twenty-seven years before by Edward III. The thickness was nine feet; there were thirty-two towers suitable for defence erected at different points, and there were twelve gates. The circumference was three miles. It was nearly forty years before the wall was entirely completed. The wall was pulled down by order of Charles II., in consequence of Coventry having set at defiance Charles I. and his army when he appeared before the gates and demanded admission. In pulling down the wall, the first breach was made July 22, 1662, and by the aid of five hundred men, in rather more than three weeks, the wall, with the towers, was levelled, but most of the gates were left standing, and one or two of the smaller gates yet remain.

In 1397 Richard II. selected Coventry for the great trial by combat between the Duke of Hereford (after-

wards Henry IV.) and the Duke of Norfolk. Gosford Green was the spot chosen for setting out the lists, and a magnificent display there was, according to the picturesque description given by Holinshed. At the moment of the commencement of the combat, Richard put a stop to it, and banished both the combatants, Hereford for a term of years and Norfolk for life. (See Shakspere's 'Richard II.,' Act I.) Holinshed's description of the lists and the proceedings is given in Knight's 'Pictorial Shakspere,' at the end of Act I.

That lofty and beautiful piece of work, the steeple of St. Michael's church, was begun in 1373, and finished in 1395. The cost was chiefly borne by William and Adam Botoner, each of whom was several times Mayor of Coventry. The square tower is 136 feet high, and supports, on eight arches springing from the pinnacles, an octagon 32½ feet high, from the inside of which the spire, fluted and embossed, rises to the height of 139 feet 9 inches. The entire height is therefore 308 feet. It is altogether as striking in its general character as it is delicately symmetrical in its proportions and chaste in its ornaments. The body of the church is supposed to have been erected in the reign of Henry VI. The whole of the exterior has an air of grandeur. In the interior the centre is divided from the aisles by clustered columns supporting lofty arches. The ceiling is of oak, ribbed and carved.

Trinity church, though it suffers by comparison with its neighbour St. Michael's, is yet a handsome structure. The form is that of a cross. A square tower, 99 feet high, rises from the centre, and is surmounted by a spire 132 feet high. It was appropriated to the Prior of Coventry in the 44th year of Henry III.

St. John's church is also ancient, but still smaller than Trinity.

The Priory, which was founded by Earl Leofric, in the reign of Edward the Confessor, about 1043, was for twenty-four monks of the order of St. Benedict, with the privilege of choosing an abbot from among themselves, but after a short time the title of abbot was changed for that of prior. The priory was surrendered to the commissioners of Henry VIII. in 1538, and was soon afterwards ordered to be taken down. It stood on the south side of the river Sherburn. It appears to have been a large pile of buildings. In 1404 Henry IV. held a parliament in the great chamber of the Priory.

The Cathedral stood near the churches of St. Michael and Trinity, in a space called the Hill Close. It is said to have been a splendid edifice, built on the model of Lichfield Cathedral. The two churches and the cathedral, standing thus near each other, and seen without interruption from the area in which they were erected, must have formed a group as unusual as it was magnificent. The Cathedral was taken down at the same time as the Priory. Many earnest applications were made to Henry to spare the Cathedral, but in vain.

The Bishop's Palace, which stood at the north-east corner of St. Michael's churchyard, was sold in 1647.

The Grey Friars, or Friars Minors, are supposed to have settled in Coventry about 1234. They obtained liberal contributions, and erected a monastery and church on the south side of Coventry, on land allotted them out of the manor of Cheylesmore, Edward the Black Prince allowing them "to take so much stone out of his quarry in the park of Cheylesmore, as they should have occasion to use for their building and walls." There are no remains of the habitable part of the buildings; but a fine steeple with a spire springing from an octagon, which belonged to the church, are still in existence. The Grey Friars were the institutors of the far-famed Coventry pageants, and the performers of the Mysteries which annually attracted such a concourse of persons to Coventry on the day of Corpus Christi. (See 'Penny Magazine,' No. 671, vol. ii., New Series.) The order was suppressed in 1538.

The Carmelites, or White Friars, had also a monastery and church in Coventry. The order was suppressed in 1538, and the monastery and its possessions granted to Sir Ralph Sadler in 1545. Remains of the monastery now form part of the House of Industry. The church, which adjoined the city wall, without Newgate, is entirely gone.

The Cross, in Coventry, which was of such celebrity, occupied the place of a former cross of less pretension, which was erected in 1423, and taken down in 1510. The new structure was erected a few years afterwards. It was of Gothic architecture, and of exquisite workmanship. The form was six-square; each side was seven feet at the base; the entire height was fifty-seven feet. It was divided into three stories, and had seventeen niches with statues. The pillars and arches were adorned with figures and other carved-work. The whole was painted and gilded, and on occasions of display flags waved from every pinnacle, displaying the arms of England, of the founder, of the different guilds, &c. It was repaired in 1620, at an expense of 323*l.*, and again in 1669, at an expense of 276*l.* From this time, however, it seems to have been neglected, and gradually fell into decay and ruin. The last fragments were taken away in 1771.

Another of the glories of ancient Coventry was St. Mary's Hall, which fortunately yet remains. Coventry, in its "high and palmy state," was termed "The Chamber of Princes;" and St. Mary's Hall, not only for the beauty of its workmanship and the splendour and variety of its decorations, but for the number of royal and noble persons who have sat within its walls, and partaken of the liberality of the mayor and citizens of Coventry, may be supposed to have contributed in an especial manner to procure for the city that honourable title. The great hall is a noble room, twenty-one yards long and ten yards wide. The windows on every side are filled with painted figures and arms of kings, queens, and nobles, bishops, mayors of Coventry, and others. The hall also contains a piece of tapestry thirty feet long by ten feet high, extremely interesting, displaying Henry VI. and his courtiers, Queen Margaret and her ladies, and a variety of figures of saints, Christian knights, allegorical figures of justice, &c., the whole arranged in two series of three compartments each.

St. Mary's Hall was originally built in the early part of the reign of Henry VI. for the accommodation of the guilds of the city of Coventry. As these guilds were sanctioned and protected by the mayor and aldermen, the hall was not only used by the different companies for purposes of business or festivity, but was applied to the same purposes by the corporation, and on the suppression of the guilds it became the public hall of the city.

Another of the characteristics of ancient Coventry deserves to be mentioned, as displaying the vast number of persons who resorted to it in its prosperous days —"its great and sumptuous inns," as they are described by Harrison, "able to lodge two hundred or three hundred persons and their horses at ease, and thereto, with a very short warning, make such provision for their diet as to him that is unacquainted withal may seem to be incredible. And it is a world to see how each owner of them contendeth with other for goodness of entertainment of their guests, as about fineness and change of linen, furniture of bedding, beauty of rooms, service at the table, costliness of plate, strength of drink, variety of wines, or well using of horses."

In those days the visits of kings and queens were frequent—Edward III. and his son the Black Prince, Henry IV., Henry VI. and Queen Margaret, Richard III., Henry VII., Henry VIII., Elizabeth—as well as those of nobles and other dignified and rich persons.

USES OF THE HAZEL.

The hazel may be ranked among those trees which render more service as articles of food than as sources of timber; but it is nevertheless useful in various other ways; and an abstract of these uses, from the descriptions by Mr. Loudon and other writers, may not be uninteresting.

Generally speaking, the hazel is a shrub or low tree, but one variety is a timber-tree of middle size. The kind which produces the common hazel-nut grows to the height of about twenty feet. The bark is ash-coloured, and sometimes cloven on the trunk; but on the branches it is of a clear bright brown, frequently spotted with white. The leaves are roundish, stalked, and alternate, darkish green on the upper surface and lighter beneath. The rate of growth, under favourable circumstances, is from one and a half to two feet in the first two or three years after planting; after which, if trained to a single stem, the tree grows more slowly, attaining the height of twelve feet in ten years, and never growing much higher unless drawn up by other trees. It grows well under the shade of other trees, but not under their drip.

This tree is a native of all the temperate climates of Europe and Asia, and is found in every part of Great Britain, sometimes at so great an altitude as sixteen hundred feet. On the Alps the nut-trees are found at an altitude of nearly four thousand feet. Evelyn states that the hazel "affects cold, barren, dry, and sandy grounds; mountainous and even rocky soils produce them; they prosper where quarries of freestone lie underneath, as at Hazelbury in Wiltshire, Hazelingfield in Cambridgeshire, Hazelmere in Surrey, and other places; but more plentifully if the ground be somewhat moist, dankish, and mossy, as in the fresher bottoms and sides of hills, holts, and in hedge-rows." In Kent the hazel thrives best in a calcareous loam on chalk or rock; but in Scotland it is found on granite, basalt, and freestone.

There are many passages in the early writers indicating that the hazel was familiarly known. We read in the thirtieth chapter of Genesis, that "Jacob took him rods of green poplar, and of hazel and chesnut-tree, and pilled white strakes in them, and made the white appear which was in the rods." The hazel-nut was known both to the Greeks and Romans, the latter especially making frequent mention of it. The hazel was said by Virgil to be considered by the Romans as injurious to vines, on account of its spreading roots; and as the goat was equally injurious by browsing on the young shoots, the keepers of the Roman vineyards sought to remove both these evils by sacrificing the goat to Bacchus and roasting its entrails on hazel spits. The common hazel-nut and the filbert-nut are produced from two varieties of the tree; the former was by the Romans called *nux Avellano*, from the town of Avellino in Naples, where they have always been produced in great abundance; while the filbert was called the *nux Pontica*, from being found at Pontus. In later times the troubadours and old French romance-writers celebrated the hazel-bush and the hazel-nut in many of their songs.

But the most remarkable feature in the past history of the hazel is that connected with the superstitious "uses" of the tree and its fruit. This superstition has been very widely spread. There is a passage in Evelyn which shows the popular belief in his time. After enumerating some of the uses of the hazel in the arts, he adds:—"Lastly, for riding-switches and *divinatory rods*, for the detecting and finding out of minerals (at least if that tradition be no imposture), it is very wonderful, by whatever occult virtue the forked stick (so cut and skilfully held) becomes impregnated with those invisible steams and exhalations, as, by its spontaneous bending from a horizontal posture, to discover not only mines, subterraneous treasure, and springs of water, but criminals guilty of murder, &c. made out so solemnly, and the effects thereof, by the attestation of magistrates and divers other learned and credible persons (who have critically examined matters of fact), is certainly next to a miracle, and requires a strong faith. Let the curious, therefore, consult the philosophical treatise of Dr. Vallemont (*Physique occulte, ou Traité de la Baguet divinatoire*), which will at least entertain them with a world of surprising things." It is partly evident from the curious language adopted by Evelyn that he was half inclined to doubt the truth of these "surprising things;" but the general tone of feeling at the time was decidedly in favour of this kind of belief. The belief that certain gifted persons possessed the power of discovering hidden water or metals by means of a divining-rod is as old as the time of the Romans; but this potent wand was not always made of hazel, or even of wood; it was sometimes made of brass or other metal. A technical name, *rhabdomancy*, was coined in the fifteenth century to express this art, the word implying "divination by a staff or rod." Persons made a trade by this imposture, and called themselves rhabdologists or rhabdomists. The prophet or diviner took a hazel-rod, which was either curved or forked, and held it by the two ends so that its curvature should be inclined outwards. If the person who held the rod possessed the power of rhabdomancy, and approached any metallic vein or other magnetic substance, or came near them, a slow rotatory motion of the rod ensued in different directions, according to particular circumstances. In other cases the rod was peeled, and then laid on the palm of the hand, with the butt end of the twig on the pulse of the wrist; and the divinor moved slowly along till the rod pointed to the desired place; the rhabdomist feeling, at the same time, either a violent acceleration or retardation of the pulse, and a sudden sensation of great heat or great cold.

Sir Walter Scott makes use of this superstition in reference to Dousterswivel's pretended search for gold. Several instances of the use of the hazel divining-rod are recorded in the earlier volumes of the 'Gentleman's Magazine,' relating to the former half of the last century. In the seventeenth century the following description of the mode of proceeding was given: "The finding of gold which is under the earth, as of all other mines of metal, is almost miraculous. They cut up a ground-hazel of a twelvemonth's growth, which divides above into a fork, holding the one branch in the right hand and the other in the left, not held too slightly or too strictly. When passing over a mine, or any other place where gold or silver is hidden, it will discover the same by bowing down violently, a common experiment in Germany, not proceeding from any incantation, but a natural sympathy, as iron is attracted by the loadstone."

There were a few other modes in which the hazel acted a part in superstitious observances. The ashes of the shells of the hazel-nut, applied to the back of a child's head, were supposed to turn the child's eyes from grey to black. One old herbalist says:—"Some doe hold that these nuts, and not wallnuts, with figs and rue, was Mithridates' medicine, effectuall against poysons. The oyle of the nuts is effectuall for the same purposes. If a snake be stroke with a hazel wand, it doth sooner stunne it than with any other strike; because it is so pliant that it will winde closer about it; so that, being deprived of their motion, they must need die with paine and want; and it is no hard matter, in like manner, to kill a mad dog that shall be strook with an hazel sticke, such as men use to walk or ride withall."

But we will proceed to uses more practical and un-

equivocal. The hazel-tree, in its wild state, affords protection to various small birds by its numerous branches. Considered as a timber-tree, the wood is never of sufficient size for building purposes; but it is used in cabinet-making, and for various smaller and more delicate productions. It is tender, pliant, of a whitish red colour, and of a close, even, and full grain; but it does not take a very bright polish. The roots, when of sufficient size, afford curiously veined pieces, which are used in veneering cabinets. The great use of the hazel, however, is for undergrowth. Being extremely tough and flexible, the root-shoots are used for making crates, hurdles, props, wattles, walking-sticks, fishing-rods, whip-handles, ties for faggots, springs to catch birds, for fastening down thatch, and for withes and bands for various purposes. A strong fence is made by driving stakes into the ground and wattling the space between them with hazel-rods. Evelyn, while speaking of the hazel, says:—"The use of the hazel is for poles, spars, hoops, forks, angling-rods, faggots, cudgels, coals, and springs to catch birds; and it makes one of the best coals, once used for gunpowder, being very fine and light, till they found alder to be more fit. There is no wood which purifies wine sooner than the chips of hazel. Also for withs and bands; upon which, I remember, Pliny thinks it a pretty speculation that a wood should be stronger to bind withall, being bruised and divided, than when whole and entire." After detailing other uses, he goes on to say:—"But even after all, the most signal honours it was ever employed in, and which might deservedly exalt this humble and common plant above all the trees of the wood, is that of *hurdles* (especially the flexible white, the red and brittle), not for that it is generally used for the folding of our innocent sheep, an emblem of the church, but for making the walls of one of the first Christian oratories in the world, and particularly in this island, that venerable and sacred fabric at Glastonbury, founded by St. Joseph of Arimathea; which is storied to have been first composed but of a few small hazel-rods interwoven about certain stakes driven into the ground; and walls of this kind, instead of laths and punchions, superinduced with a coarse mortar made of loam and straw, doe to this day enclose divers humble cottages, sheds, and outhouses in the country; and it is strong and lasting for such purposes, whole or cleft, and I have seen ample enclosures of courts and gardens so secured."

Hazel-rods, cut as nearly as possible of equal size, and varnished, form an admirable material for constructing rustic garden-seats and flower-baskets. Mr. Loudon gives two wood-cuts to show what may be effected in this respect. An agreeable variety may be produced by using the rods alternately peeled and unpeeled; or by mixing them with rods of some other kind of wood. Unpeeled hazel-rods are, however, both handsomer and more durable than similar rods of any other kind of tree; and a variety may be produced in them by choosing them with bark of different shades, or even staining them with a decoction of logwood or some other dye. Hazel-rods thus selected may be arranged in any fancy pattern for an arbour or other purpose; and a Mr. Matthews, a carpenter residing at Trimley in Berkshire, has carried this curious kind of art so far as to produce a landscape, by the interlacing and ingenious arrangement of differently coloured hazel-rods.

The nuts, or fruit, are deemed the most important part of the hazel-tree. Mr. M'Culloch states:—"Besides those raised at home, we import nuts from different parts of France, Portugal, and Spain, but principally from the last. The Spanish nuts held in the highest estimation, though called Barcelona nuts, are not really shipped at that city, but at Tarragona, a little more to the south. Mr. Inglis says that the annual average export of nuts from Tarragona is from twenty-five to thirty thousand bags, of four bags to the ton. The cost was, free on board, in autumn, 1830, 17*s.* 6*d.* a bag. The entries of nuts for home consumption amount to from 100,000 to 125,000 bushels a year; the duty of 2*s.* a bushel producing from 10,000*l.* to 12,500*l.* clear." Evelyn says that in his time hazel-nuts, though considered unwholesome to those who were asthmatic, were "thought to be fattening; and, when full ripe, the filberts especially, if peeled in warm water, as they blanch almonds, make a pudding very little if at all inferior to what our ladies make of almonds." The kernels have a mild farinaceous, oily taste, agreeable to most palates. A kind of chocolate has been prepared from them; and they have been sometimes made into bread. The expressed oil of hazel-nuts, called nut-oil, is little inferior to that of almonds; it is best made in the middle of winter, as the nut yields little oil if made sooner; and if made later, the oil is apt to become rancid; but there is not much of it made in this country.

Hungarian Yeast.—The yeast prepared by the Hungarians will keep for a whole twelvemonth. During the summer season they boil a certain quantity of wheaten bran and hops in water. The decoction is not long in fermenting: and when this has taken place they throw in a sufficient portion of bran to form the whole into a thick paste, which they work into balls: they are afterwards dried by a slow heat. When wanted for use they are broken, and boiling water is poured upon them: having stood a proper time, it is decanted, and in a fit state for leavening bread. The Romans prepared their yeast much in the same way—taking wine in a state of fermentation, and working up a given quantum of the flour of millet with it; the paste thus obtained was made into balls and dried. It often happens that the yeast, the leavened dough, or the dough itself, will become acid in summer, and acidulate the bread: this may be remedied by throwing some fingersful of carbonate of magnesia in the yeast or paste.

Commercial Navy of Eastern Africa.—In approaching the land (at Patta), we were forcibly struck by the contrast in the coasting-trade carried on here, and the cheerless absence of it which we had observed in parts that we had lately visited, where man seeks to thrive solely by the sale of his fellow-creatures, and impiously (I conceive the word not ill applied) neglects the cultivation of the soil which nature has so liberally endowed. In all directions the large boats, or, as they are called, dows, were seen, principally freighted with the produce of the land, coasting their way along shore. Their extraordinary build did not fail to attract our attention. They are generally sixty feet long and fourteen broad, their head terminating in a long point, and their stern in one not much shorter; and as they are built like a wedge, so, on grounding and being left by the tide, or hauled up on purpose, they require to be shored in that position by logs, which they always carry. Their planking is more frequently secured to the ribs by Cairo lashings than by nails or bolts; and with some the seats or beams projected a short distance through the side, like those of Delagoa boats. Their huge square sail, of canvas or matting, has a yard above and below, with braces, and three or four bow-lines; and, notwithstanding their uncouth appearance, they are very swift, and sail much closer to the wind than most vessels. They are always well manned, and generally pull with sixteen oars or paddles, unless when in shoal water; they then prefer the employment of long slender poles used against the ground for propelling their canoes. In the management of these poles they show great dexterity, and it requires much practice to equal them. The dows, when large, have sometimes a small canopied space near the stern, on which, when prosecuting their voyage, the turbaned old chief is often seen standing and issuing his commands. Not a single instance have I known of one without an ornamental circle painted or carved on either bow or stern. These vessels are employed in the coasting-trade, in which grain is the principal article; and likewise communicating between the islands of Zanzibar and Pemba and the main.—*Captain T. Boteler's Voyage of Discovery to Africa and Arabia.*

[Court-yard of Tattersall's.]

AUCTIONS IN LONDON.—No. III.

[Concluded from p. 107.]

The general features of an auction-room are of course pretty much the same in London as in every other part of the country, but there is one very striking exception —Tattersall's; and which accordingly we proceed to describe somewhat in detail. The name of Tattersall is familiar and respected throughout Europe; and the circumstance implies, what the known history of the establishment confirms, that, apart from the magnitude and general probity of its transactions, there have been exhibited some peculiar characteristics on the part of its founders and managers which have honourably distinguished them from the mere horse-dealing fraternity. Now whether we look in the brief records that tell of the history of the founder, or wander through the place itself—now emphatically known as Tattersall's, we are not left long in doubt as to the nature of those characteristics. Richard Tattersall was training-groom to the second and last Duke of Kingston, brother of Lady Mary Wortley Montague, and husband of the notorious duchess, in whose service he remained till his noble employer's death in 1773. He then appears to have opened his auction-mart; but the foundation of his fortune was laid by the sale to him of the racehorse Highflyer, for the enormous sum of 2500*l.*; and, it is supposed, on credit, an evidence of the high character for integrity he must have already acquired. Of his personal qualities, perhaps the establishment is the best testimony; what Tattersall's is now, it seems to have essentially been from the very outset, a place where men of honour might congregate without breathing, or at all events in but a greatly lessened degree, the pestilential vapour that usually but too often surrounds the stable; where men of taste might enjoy the glimpses afforded of the most beautiful specimens of an exquisitely beautiful race, without being perpetually disgusted with the worst of all things —that of the jockey or horse-dealer.

Familiar as the name of Tattersall's, however, is, there are no doubt thousands, even in London, who know not its locality. Let us state, then, that its entrance will be found at the south-eastern corner of St. George's Hospital (opposite Hyde Park gates); and as we pass through it downward, for the way slopes, we see before us the "Turf," a tap-room for the throngs of grooms, jockeys, and poorer horse-dealers and horse-fanciers. On our left we find the new Subscription Room, fitted up in the interior with desks, and ornamented with a portrait of Eclipse. Here the wealthier and more aristocratic classes, who in a great measure, dispense law and fashion, and opinion in all that concerns horse-breeding, racing, and betting, congregate in exclusive privacy, and on particular occasions a stirring scene is presented both within and without the walls of this building. "Let us suppose that the two thousand guineas stakes have been run for, and the winner is up as a favourite for 'the Derby.' It is a day for re-modelling or for making 'a book.' There is flutter and bustle and excitement ever in the penetralia of the Subscription-room, but the hubbub in the court defies description. All are eager, excited in earnest, even savage. Short and sharp are their exclamations, and in a language which the disciples of Irving might have been excused, had they mistaken it for one of the unknown tongues. 'Hedging,' 'levanting,' 'a hundred ponies to one,' and a triple bob-major rung on all the devil-may-care names of the whole list of horses entered for the Derby. This is the augury of coming events, but what passes when 'the struggle is over, the victory won?' Why, in the words of an older and better song, 'there's nobody knows,' at least nobody but the initiated. On the awful 'settling day' the doors are shut on the *profanum vulgus*, and the betters pay, receive, or make themselves scarce among themselves. It is quite useless for any one who has not the entrée to attempt to catch a notion of what passes; but scandal-mongers do say that a peculiar set of philosophers, great observers of life, may be noticed on such days hovering

in the neighbourhood—the sheriff's officers for the county of Middlesex."*

Let us now pass into the court-yard, the great business place of Tattersall's, the Auction Mart so renowned through all the breadth and length of horse-loving, horse-breeding, horse-racing Europe; and which from all parts sends hither its representatives, when the more important sales are going on, and, with a confidence justified by the known character of the house, commissions the proprietor himself to procure for the nobles and gentry of the Continent fresh supplies for their studs of the finest English horses. Our view shows the general aspect of the court-yard. That domed structure in the centre gives elegance to an humble but important appendage—a pump. The fox, we presume, belongs to the poetry of Tattersall's, suggesting, as it does, breezy rides over hill and dale and far-stretching moorlands. The bust above, of George IV., refers to more specific facts of which the establishment can boast; it is a type of the lofty patronage that has been acceded to the house from its earliest days. The bust represents the first gentleman of Europe, as he has been called absurdly enough, in his eighteenth year, when the prince was a constant attendant at Tattersall's. Since then no important name in sporting annals but could be found among the list of visitors. Around three sides of the court-yard extends a covered-way; at the extremity of one side stands the auctioneer's rostrum, overlooking the whole area. The stable, where the horses to be sold are kept in the interim, is close at hand, and excites attention by its size and admirable arrangements for light and ventilation. The ranges of ordinary stabling are also admirable specimens of what has been done in modern times to secure the health and comfort of their stately inhabitants. The public days are the Mondays in each week through the year, with the addition of Thursdays in the height of the season. The horses of the chief sale, that of the Monday, arrive on the Friday previous. When the settling time arrives, great are the bustle and excitement that prevail throughout Tattersall's. Vehicles of all kinds dash to and fro in incessant motion, or linger altogether inactive in rows about the neighbourhood, while their masters are bidding for a good hunter or a pair of carriage-horses. A more motley assemblage than the buyers or lookers-on at such times it would be impossible to find. Noblemen and ambitious costermongers, bishops and blacklegs, horse-breeders, grooms, jockeys, mingling promiscuously with the man of retired and studious habits fond of riding and breeding the wherewithal to ride, tradesmen about to set up their little pleasure-chaise or business-cart, and commercial travellers, whose calling has inoculated them with a passion for dabbling in horse-flesh, and who, in their inns on the road, talk with great gusto and decision of all that pertains to Tattersall's, on the strength of some occasional half-hour's experience in the court-yard.

Whatever the advantages attending the maintenance of races, which are said to be the very corner-stone of the system of English improvements in horse-rearing, and therefore of all such establishments as the one in question, there can be no doubt that there are such serious accompanying evils, as may well make it a question whether entire abolition of the pastime, national though it be, will not be the preferable course, if those evils cannot be got rid of. The worst is the betting-book-making system, which the writer from whom we have transcribed a preceding passage thinks originated only in the last century. Holcroft relates the anecdote which led to this conclusion; who says, referring to the year 1761 or 1762:—"In addition to matches, plates, and other modes of adventure, that of a sweepstakes had come into vogue; and the opportunity it gave to deep calculators to secure themselves from loss by *hedging* their bets, greatly multiplied the bettors, and gave uncommon animation to the sweepstakes made. In one of these, Captain Vernon (Holcroft's master) had entered a colt or filly; and as the prize to be obtained was great, the whole stable was on the alert. It was prophesied that the race would be a severe one; for though the horses had none of them run before, they were all of the highest breed, that is, their sires and dams were in the first lists of fame. As was foreseen, the contest was indeed a severe one; for it could not be decided—it was a dead heat; but our colt was by no means among the first. Yet so adroit was Captain Vernon in hedging his bets, that if one of the two colts that made it a dead heat had beaten, our master would on that occasion have won ten thousand pounds; as it was he lost nothing, nor would in any case have lost anything." Such was the commencement of the system that has been since attended in the humbler walks of life with the most pernicious consequences. How irresistible is the temptation to embark in a scheme which promises, under certain circumstances—and these every one hopes to command—may be seen in the pot-house clubs that overspread the country, and which infest the metropolis to a degree that is positively fearful. Even youth itself is not secure from the immorality of the system; "a house in West Smithfield announces 'a Juvenile Derby Sweep, at 10*s.* 6*d.* each.'" But is all this necessary to horse-racing? If that cannot be answered in the negative, the next query will be, and it may come in a legal shape—is horse-racing itself necessary to the developement of all that is valuable in that beautiful animal? The writer in 'London' thinks the gambling is unnecessary, and points out the means of repression. The Subscription-room at Tattersall's is frequented by the élite of the amateurs of the turf: it sets the fashion. If its members were to pass a resolution and enforce it, that no systematic gambling was to be allowed among them—that the 'book-makers' were to be told to betake themselves to Crockford's and Jonathan's, the proper resort of gentlemen of their profession—the example would in no long time spread, through the medium of the motley squad which throngs the Auction Mart, to catch a glimpse of the subscribers, and learn to imitate their deportment. Racing would become the pursuit of admirers of the horse exclusively—for the gambler cares not for the horse more than for his dice, or scrip and omnium. There is enough of pleasurable employment—of excitement in the breeding, acquisition and training of fine horses, and the uncertain contests of the course, without the spice of gambling. The patrons of the turf can keep it, what it has always been, a source of pleasure to themselves, a means of improving the national breeds of horses for all purposes, an annual festival to the whole people of England, and prevent it from continuing what it has been allowed in a great measure to become, a source of demoralization to thousands. If they, by their example, will but diffuse a healthy distaste for gambling through the bulk of sportsmen, the police will deal with the flash Derby-houses; but so long as they allow undetected blacklegs, trading book-makers, buyers and sellers of chances, to associate with and be in common estimation confounded with themselves, there is no possibility of checking the mischief." We hope all this may yet prove practicable; but in the mean time cannot but ask—Is it certain that the great body of the patrons of the turf possess or desire for themselves such "healthy distastes?" a very indispensable preliminary to their conveying them to others.

* 'London,' No. CXLVIII.—'Tattersall's,' an amusing paper, to which we must express our obligations.

THE PRESERVATION OF TIMBER.

Many animals are occasionally afflicted with diseases of an extraordinary kind, arising from the growth of vegetable substances within them; the vital organs being by degrees so eaten away or impaired as to terminate the existence of the animal. A vegetable fungus has been found attacking a species of West Indian wasp, and another has been detected in the silkworm; the animal in each case being almost eaten away by the growth of the vegetable within it. The peculiar effects designated *mildew*, *smut*, &c. are in like manner the results of fungous growth; and such is likewise the case in respect to *dry-rot*, that premature decay of timber which for so many years has attracted the attention of practical men.

The dry-rot in timber appears like a disease which, by decomposing the fibres, deprives the wood of all strength, and in a space of time more or less extensive reduces it to a mass of dry dust. This disease does not seem to have attracted much notice until the middle of the last century; and even long after then the matter was not regarded as of serious importance. At length, however, the premature decay of many of the royal ships attracted general notice, and inquiries were instituted in various quarters as to the cause of it. In 1810 the Queen Charlotte, a first-rate ship of war, was found to have the ends and joints of the beams covered with a mouldy, fibrous, and reticulated crust, constituting dry-rot. Theories and proposals emanated from all quarters, every one suggesting a mode of cure or of prevention, but all failing, because the nature of the disease was not at that time properly understood. At first it was not known whether *common rot* and *dry-rot* were the same; but in more recent times the points of difference between them have been clearly shown.

If a post of wood be driven into the ground, seasoned or unseasoned, it will speedily begin to decay just at the surface of the ground, or, as it were, between the earth and the air. If driven into the earth through water, as in a pond, the decay will commence at the surface of the water, or, as it is technically expressed, "between wind and water;" whilst all that is above water and all that is constantly in the water, as well as the part in the earth, will remain sound. In these cases the rot begins *externally* and progresses inwards. But if the same post be well charred, or covered over with a thick coating of paint or varnish, no such effect will be produced externally, the coating being sufficient to protect it against the action of the weather. If, however, the post happen to be a green and unseasoned piece of wood, in no great length of time it will, even though tarred or painted, be found in a decaying state *internally*, whilst the outer surface appears uninjured, although in course of time this too becomes affected. The wood swells, changes its colour, and emits gases which have a mouldy or musty smell. In the more advanced stages of the decay cracks appear in transverse directions; and, lastly, it becomes pulverulent and forms vegetable earth.

Thus the *common rot* is an external disease extending inwards; while the *dry-rot* is an internal disease extending outwards: and it is plain that the causes of decay must be sought for in different directions. As to dry-rot, it became generally understood to result from the growth of a species of fungus or mushroom within the pores of the wood; but it was not till within a comparatively recent period that it became satisfactorily proved how the growth occurred. Some said that the dry-rot *is* a fungus; others that it is the *effect* of a fungus; and the latter seems now to be deemed the correct opinion. The first indication of dry-rot consists in small white points, from which a filamentous substance radiates parallel with the surface of the timber; and this is now considered to be the first stage of growth of the fungus-seed, the filamentous matter being the spawn. As this spawn gathers strength, its filaments insinuate into the crevices of the wood; and these filaments being exceedingly fine, they readily pass down and between the tubes from which the wood is organized, forcing them asunder, and completely destroying the cohesion of the tissue. When the filaments of many fungi interlace, the radiating appearance can no longer be remarked; but a thick, tough, leathery, white stratum is formed wherever there is room for its development, and from this a fresh supply of the destructive filament is emitted, which will gradually rot the whole mass of timber.

The vegetable fungus may fairly be supposed to obtain a lodgment in the timber by the settlement or subsidence of the seeds of the fungus. The fine impalpable powder that issues from the common "puff-ball" will give some idea of the myriads of minute seeds which it encloses; and if we suppose a similar countless host of seeds to result from the fungus tribe, it is not difficult to conceive how these may, by being wafted through the air, fall on the soil near where a tree is growing, and become absorbed with the sap. The seeds, it is supposed, are carried up the longitudinal tubes in a growing tree by the rising of the sap; but so long as the vital principle in the sap of the tree remains in activity, the vegetation of the parasite does not commence. Indeed it appears that the sap must be brought into a kind of putrefactive or fermenting state before the germination of the seed begins; and hence if the dry-rot is seen in a living tree, it is only in some decayed or diseased part.

The production of dry-rot in timber being thus considered to be the germination of fungus-seeds in wood-sap while in a fermenting or decomposing state, the prevention and cure seem to lie in the removal of the ferment: for it does not appear probable that we could prevent the seeds themselves from being carried up into the living tree. Under this view of the case, there have been three classes of expedients adopted for the prevention of dry-rot:—first, drying or seasoning secondly, immersion in earth, sand, or water; thirdly, impregnation with a foreign substance which will resist putrefaction.

It has been conceived that if the sap or juice of wood be thoroughly dried, it will not form a medium in which seeds will germinate, and hence the very common and well-understood practice of 'seasoning.' Time will effect this seasoning, if the atmosphere be dry, and the wood be exposed to the free action of a current of air; but if the wood be exposed to alternations of heat and moisture, the sap does not dry, nor can the germination of the fungus be prevented. It used to be the custom to let ships of war remain two or three years on the stocks, while 'in the frame,' to season; but it is now known that that method was wrong, since the rain which lodged in the bottom of the hull, being only partially and slowly removed, encouraged the growth of the fungus. It is mainly on this account that our royal dockyards are now provided with excellent roofs over the building-slips, so that a ship on the stocks may be shielded from rain overhead, while at the same time there is free access of air on all sides. The stacks of timber in the dockyards, too, instead of being placed as formerly on the ground, are raised on iron or stone supports, so as to let air circulate beneath as well as around them.

Sometimes timber is seasoned by charring or scorching its surface, which dries up the sap; but this in some degree injures the timber, and gives it a property of imbibing additional moisture. Kiln-drying, too, which is sometimes adopted, is not so advantageous to

the timber itself as natural drying in the open air. An attempt was made some years ago to combine with the kiln-drying process another, by which the pores which had become dry were filled up with some resinous or oily substance; but it did not succeed, and every modification of kiln-drying seems to have failed. In former times there existed a very prevalent opinion, that if a tree were felled in the winter there would be no sap in the pores, and that dry-rot would not ensue. Hence many ordonnances and enactments were made in France and England, regulating the season when oak-trees might be felled, and directing that "the wind at the north" and the "wane of the moon" should be deemed favourable times for felling. But there is no decisive proof that this principle is worth much as respects the prevention of dry-rot.

Steeping in fresh water, in earth, and in sand, have all been recommended as means of preventing dry-rot. In the first of these modes the water appears to dissolve or liquefy the juices of the wood, and thus prepare them for drying in the open air. It is said that all the timber used in constructing ships at Brest is steeped for a long time in water before being used, and that the ships constructed of it are always free from dry-rot. It is found that if the 'butt' end of a log of timber be placed towards the current in a running stream, the juices become dissolved and washed out more readily than if the other end be presented towards the current,—a circumstance which seems to indicate something like a valvular structure in the pores of wood. Although the effect of immersion in running water was known or suspected long ago, yet it has only within a few years been applied in the British navy. A mast of a ship which had been at the bottom of a pond fifty years was found perfectly sound and good: a frigate, previously infected with dry-rot, sank in Malta harbour, and, after lying there several months, she was found on being raised to be totally freed from the dry-rot: some logs of timber at Pembroke Dock-yard, previously infected, were cleansed and rendered healthy by immersion in water: and lastly, an infected ship, purposely sunk in Plymouth Sound, was restored to a healthy state by immersion in the water for eighteen months. These facts drew the attention of the Admiralty to the subject; and sea-water is now deemed a valuable means of increasing the durability of timber for ships. It is supposed to act by destroying the vitality of the fungi which may be lodged in the pores; but whether it prevents the fermenting or putrefactive action of the sap seems not yet to be quite determined.

The last method we have to mention, viz. *impregnation*, is the one to which attention is most directed in the present day. This consists in extracting the sap from the wood, and supplying its place with substances which will not allow the fructification of the fungi. There have been a constant series of inventions having this object in view for more than half a century past. Mackonochie, in 1803, impregnated timber in the following manner:—He placed the wood in a steam-tight chamber, and subjected it to the action of steam, by which the air and gases were expelled both from the chamber and from the timber. Then, by condensing the steam, and repeating the process until the whole of the elastic fluids were withdrawn from the wood, and the non-elastic converted into vapour, the wood became freed from them. The wood was then plunged into oil, and the atmospheric pressure was allowed to act on it, whereby the oil was forced into the pores of the wood. Other substances instead of oil have been proposed for this purpose. One inventor proposed to saturate the wood with a solution of green vitriol, and then precipitate the vitriol by means of lime-water. Another succeeded in impregnating wood throughout with asphaltum. The kreosote resulting from the distillation of tar has been named as a fitting substance for effecting the impregnation.

The process of *Kyanizing* involves something more of a chemical principle. Dr. Birkbeck, in a lecture which he gave on the subject, spoke thus of the steps whereby Mr. Kyan arrived at his results:—"Aware of the established affinity of *corrosive sublimate* for albumen, he applied the former substance to solutions of animal matter, both acetous and saccharine, in which albumen was a component, with a view to preserve them in a quiescent and incorruptible state; and obtained a confirmation of his opinions by the fact, that during a period of three years the acetous solution openly exposed to atmospheric air had not become putrid, nor had the saccharine decoction yielded to the vinous or acetous stages of fermentation, but were in a high stage of preservation. He conceived, therefore, that corrosive sublimate, by combination with albumen, was a protection against the natural changes of vegetable matter; and thence inferred that, albumen forming a part of wood, the latter would be protected by converting that albumen into a compound of corrosive sublimate and albumen." This was the basis on which Mr. Kyan's arrangements were made.

Sir William Burnett, physician-general to the navy, took out a patent about five years ago for a method in which chloride of zinc is the active agent. His plan is, to provide a tank partly filled with a solution of the chloride, and to steep the wood (or canvas, cordage, or sailcloth) in the solution. Wood is steeped from ten to twenty-one days, according to the thickness of the pieces. Before being used for ship-building, or for building or repairing houses, it is recommended that the wood be coated at all the parts where joints are to be made, such as joist-ends, &c., with a paint made of oxide of zinc ground up with oil.

In Uzielli's patent, of more recent date, the timber is placed upright on one end, and a flexible water-proof bag is adapted to its upper extremity. Into this bag is poured a solution of common salt, which, percolating through the pores, is intended to drive the sap before it, both sap and solution dropping from the pores at the lower end. This is evidently only a modification of the salt-water process of earlier times. Other chemical substances are used instead of salt to give hardness, flexibility, elasticity, colour, fragrance, and other qualities to the wood; but the salt solution is the only one relating to preservation.

In Payne's process the object is to give to the wood a kind of stony or granulated texture, by impelling into the pores, by exhaustion and pressure, solutions which there form solid compounds.

Perhaps the nature of some of these processes may be best explained by giving an abstract of a paper read before the Institute of Civil Engineers last year, on the preparation of the sleepers for the Hull and Selby Railway. There were two cylindrical tanks of wrought-iron, seventy feet long by six in diameter, together with a reservoir, two force-pumps, and an air-pump. The timber was placed in the tanks, and the air exhausted by means of the air-pump. A solution of corrosive sublimate was prepared, having a certain definite weight of the sublimate to a given quantity of water; and this solution was admitted into the tanks. The force-pumps were then used, to force the solution into the pores of the wood, so that every pore became saturated with it. So long as air remains in the pores, it will resist the entrance of liquids, and hence the necessity for the use of an air-pump. With eighteen or twenty loads of timber in each tank, eight men were occupied five hours in the exhaustion and pressure. It was found that the solution had penetrated to the very heart of the wood. One pound of corrosive sublimate prepared about seventy cubic feet of timber.